

Revolutionary all-in-one lens 'ReSTORing' full range of vision for people with cataracts

Up to 40,000 Australians¹ living with cataracts are set to benefit from a revolutionary intraocular lens (IOL) that offers a full visual range in the one implant and permanently removes the need for glasses in 80 per cent of patients following cataract surgery².

The ReSTOR[®] IOL uses a combination of diffractive, refractive and apodization technology adapted from NASA to create a pseudo-accommodative* lens which has a range across the entire visual spectrum at all times. This is the world's first IOL that can reliably create excellent near and distance vision with little or no other visual disturbances. Furthermore, it does not rely on ciliary muscle movement as a mechanism to move the lens.

According to leading Ophthalmic Surgeon, Dr Rick Wolfe, Secretary and Treasurer of the Australasian Society of Cataract and Refractive Surgeons and one of Australia's first surgeons to embrace this new technology, the ReSTOR lens is a breakthrough that has been 10 years in the making.

"Up until recently, we've only been able to correct distance vision in cataract patients.

"All cataract patients lose their initial ability to focus up close and then have to wear reading glasses for focusing on short distances after surgery," said Dr Wolfe.

"ReSTOR is a revolutionary lens that enables clear, consistent high-grade focusing on objects at a distance, but also allows people to perform near and mid range tasks such as reading, working on a computer or shopping.

"With the ReSTOR lens, almost all cataract patients can now maintain an active lifestyle and permanently reduce or eliminate their dependence on glasses," Dr Wolfe said.

"This is the first time this level of spectacle independence has been achieved."

The ReSTOR lens is used in adult patients with and without presbyopia, who desire near, intermediate and distance vision with increased independence from glasses following cataract surgery². It is a foldable IOL made from biocompatible acrylic and is available as a transparent lens or with a blue light filter. The patented colour is designed to block potentially dangerous short-wavelength blue rays while allowing the safe blue light rays to penetrate the eyes.

Cataracts are defined as cloudiness or haziness in the natural lens of the eye and are the most common cause of treatable blindness worldwide.

"Cataract surgery is the most common major operation in the world and it is the most effective and cost-effective at providing quality of life years of any medical intervention," said Dr Wolfe.

The most common cause of cataract formation is age. However other factors that increase the risk of cataracts include smoking, prolonged exposure to sunlight without the use of sunglasses, a family history of cataract formation, diabetic complications, injury to the eye, chronic inflammation in the eye and prolonged use of steroids.

"Anyone with cataract formation irrespective of their age (depending on certain eye metrics), may benefit from this new lens because it provides a very high level of vision," said Dr Wolfe.

"For younger patients who have otherwise healthy eyes, the implant offers cataract removal and re-instates reading ability.

"For older patients who may have lost their ability to read for up to several decades, the lens provides a welcome restoration of vision, which is of enormous benefit to them," Dr Wolfe said.

While the ReSTOR lens is primarily used in patients with cataracts, it may also be implanted in those requiring refractive surgery whose vision cannot be corrected by currently available laser therapy techniques.

“People who are especially long-sighted often need to use particularly thick lenses and those whose vision cannot be corrected by other techniques can benefit from ReSTOR by simply replacing their natural lens with this multifocal lens which allows a more normal range of vision,” said Dr Wolfe.

There is also a strong use for the lens in presbyopia – the inability to focus on close objects – a progressive condition experienced by most people over 40 years which involves a stiffening of the lens with age.

“Presbyopia is a point that we all reach with age and we need to start wearing reading glasses,” said Dr Wolfe.

“Presbyopia remains the greatest unmet challenge in refractive surgery and while strategies have worked well for many patients to date, they often involve a lot of compromise.”

According to a recent United States Food and Drug Administration (FDA) study, 80 per cent of ReSTOR patients never wear any glasses while 98 per cent never or sometimes wear glasses².

“The safety profile of ReSTOR also compares with all other intraocular lenses, although it carries a slightly greater risk over other intraocular lenses of a shadow or halo effect at night time,” said Dr Wolfe.

“So we tend not to put the ReSTOR lens in people who fly or drive at night for a living.”

The lens incorporates a technology known as apodization (adapted from technology used by NASA and in microscopy) which features microscopic ridges of progressively decreasing size that are put on the face of the lens to enhance image quality. Apodization is the lessening of the ridge size at the periphery of the lens allowing maximum distance vision in dark conditions. The function of the lens automatically adapts itself to its visual environment. Conversely, as pupil size decreases for functions such as reading, more of the lens directs light to the ‘near’ focus³.

“This process essentially mimics the human lens which automatically changes shape and position in the eye to refocus and produce a clear image,” said Dr Wolfe.

Patients undergoing IOL implantation are assessed for eye length and corneal curvature as a measure of an appropriate implant based on the strength of distance, which is specific to each individual patient. Once correct distance vision is determined, the appropriate distance correcting ReSTOR lens is implanted. The ‘add’ or close-up vision components of the lens remain uniform for all patients.

Around 180,000 (private and public) cataract operations are performed in Australia each year making it the most common operation nationwide⁴. The total annual government direct cost of treating cataract is more than \$378 million⁵. Among those patients who undergo cataract operations, about one-third are suitable for implantation with ReSTOR³.

Surgery with the ReSTOR lens in Australia has been limited to surgeons who have passed an accredited training program in performing the procedure.

To date, 2,500 ReSTOR lenses have been implanted in Australia and nearly 50,000 worldwide⁶.

Surgery with ReSTOR is performed under intravenous sedation with local anaesthetic drops for the eye. It is a quick, 10-minute Day Surgery procedure.

For more information about the ReSTOR® IOL, call 1800 50 50 49 or visit www.vistaeyes.com.au.

** Pseudo-accommodation is defined as the ability of the IOL to focus light correctly on the retina for images at various distances without mechanical movement of the lens.*

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To organise an interview with Dr Rick Wolfe, please contact Kirsten Bruce or Ruby Archis from viva! communications on 02 9884 9011 or 0401 717 566 / 0413 834 906.

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